9th National Summit on Good, Replicable Practices and Innovations in Public Health Care Systems in India

Tele-SNCU (Special Newborn Care Unit) Niloufer Hospital, Hyderabad

NHM TELANGANA

Problem Statement

Concerns at peripheral SNCUs

Low Confidence Levels
of doctors / staff nurses in treating sick newborns

Anxiety / fear / doubt / apprehension among facility staff and parents

Supervision & Guidance
of expert Neonatalogists not available

Challenges in Neonatal Treatment at Peripheral Units

Leading to

High Count of Referrals
to tertiary hospitals for want of advanced treatment

Admissions to Pvt. hospitals
leading to high out of pocket expenditure

Loss of Valuable Time
in transport (Golden hour / Golden minute)

Intervention

Hub and Spoke model with Specialists at hub guiding neonatal care at district units.

The **Center of Excellence (CoE)** at Niloufer Hospital acts as a Hub, providing the below services to peripheral SNCUs.

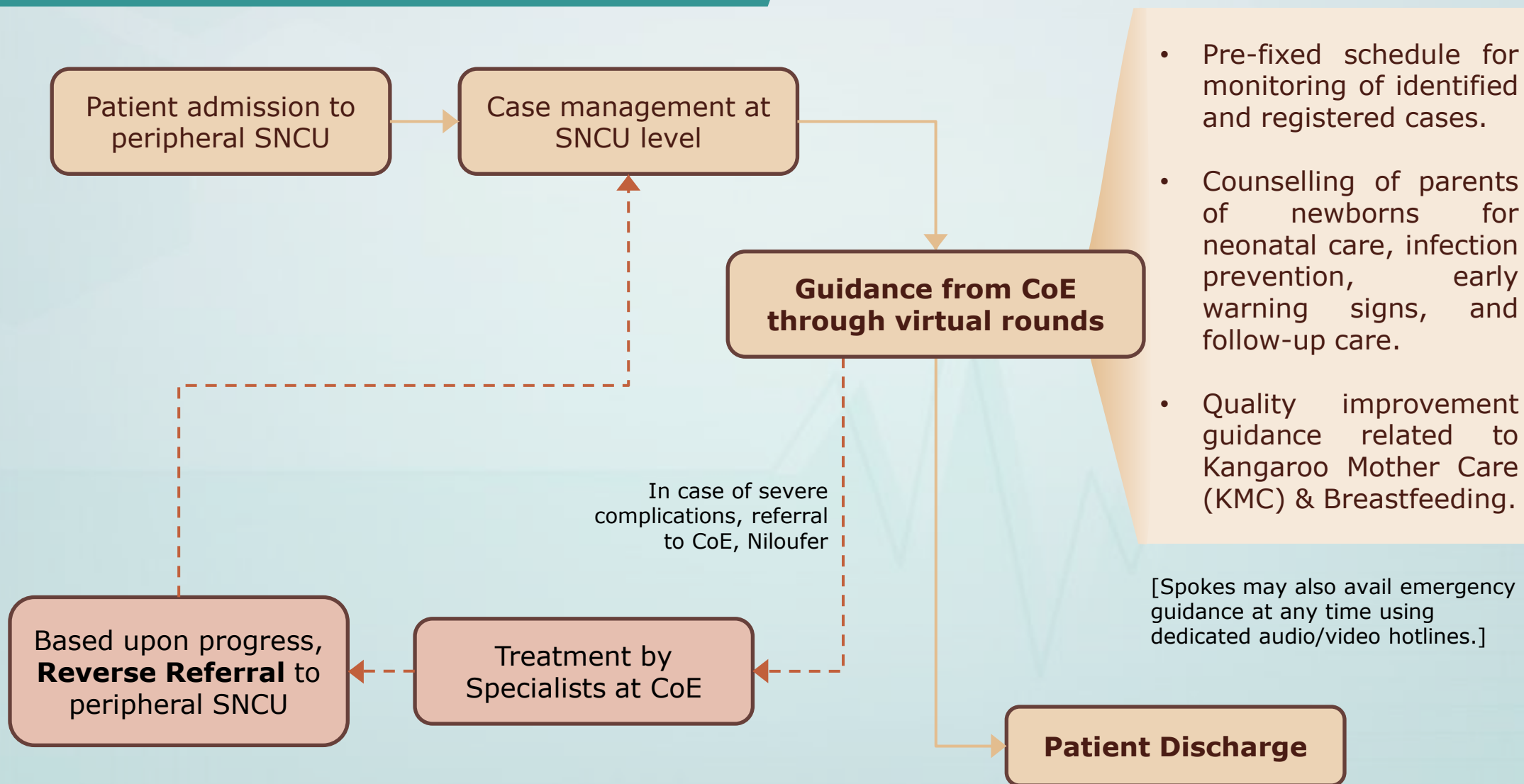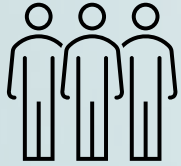| To guide and mentor the doctors and staff nurses at SNCUs in real time | Specialist monitoring of high-risk cases, their management and referrals. | Capacity building of staff by online training sessions for improving quality of care. |

Intervention

Patient admission to peripheral SNCU → Case management at SNCU level → **Guidance from CoE through virtual rounds**

In case of severe complications, referral to CoE, Niloufer

Treatment by Specialists at CoE

Based upon progress, **Reverse Referral** to peripheral SNCU

Patient Discharge

- Pre-fixed schedule for monitoring of identified and registered cases.

- Counselling of parents of newborns for neonatal care, infection prevention, early warning signs, and follow-up care.

- Quality improvement guidance related to Kangaroo Mother Care (KMC) & Breastfeeding.

[Spokes may also avail emergency guidance at any time using dedicated audio/video hotlines.]

Intervention

1 **HUB ✚ SPOKES** **28**

Human Resource at CoE

Specialist Doctors : 2 (NHM) & Niloufer Hospital Doctors

4 Staff Nurses and 1 Data Assistant (NHM)

Infrastructure at CoE (Hub) & SNCUs (Spokes)

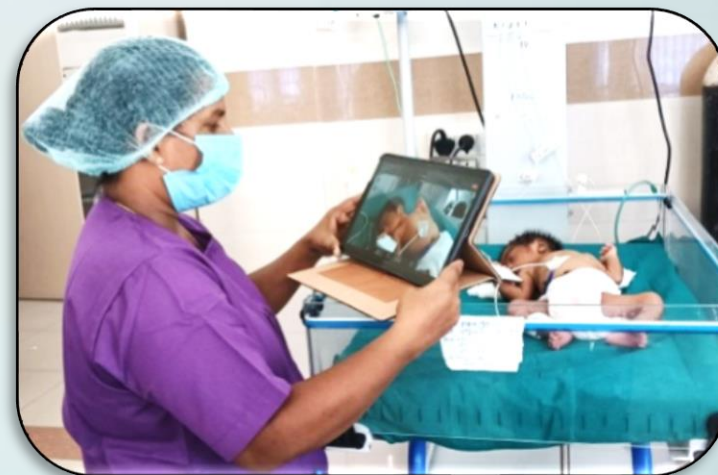| Hub	Spokes
• **55 Inch Video Wall Panel** for live feed.	• **Tabs** were given to all the SNCUs for portability and convenience.
• **6 individual workstations** with hotlines to spokes for inbound and outbound calls.	• **Dedicated WIFI connection** for uninterrupted video streaming.
• **Group license** for video conference platform.	

Photo Gallery

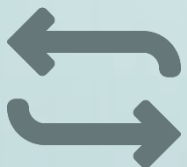# Photo Gallery

Result / Outcome

Improved efficiency in respiratory support & increased confidence of spokes for timely and appropriate use of CPAP through virtual guidance by Hub.

Neonatologists address critical issues in virtual rounds, preventing unnecessary referrals and saving transport time.

[In case of referral, detailed reasons are recorded in order to evaluate and take corrective action in future.]

Reverse referrals have helped in supervised completion of antibiotics course and ensuring weight gain.

Result / Outcome

Referral Rate
from SNCUs to Niloufer

Admissions
in Peripheral SNCUs

**Leaving against
Medical Advice
(LAMA) cases**

Year	Before COE Jul 2022 - Jun 2023	After COE Jul 2023 - Jun 2024	Jul 2024 to Jan 2025 (7 months)
Total Admissions in 28 SNCUs	30,054 (Avg per month – 2,500)	31,196 (Avg per month –2,600)	20,011 (Avg per month –2,860)
No. of Referrals to Niloufer	1,732	490	281
% of Referrals	**5.76 %**	**1.57 %**	**1.40 %**

The CoE has enabled **effective in-house management** of sick neonates under the guidance and monitoring of experts from Niloufer Hospital.

Cost Implication

Description	Cost
One time cost	
Renovation - Sound proof room, ACs, Uninterrupted power supply (UPS), etc.	~ Rs. 50 lakhs
Setting up video wall, computers, dedicated internet, zoom license, Tabs to facilities (SNCUs)	~ Rs. 65 lakhs
Total	**~ Rs. 1.15 crores**
Annual Recurring Cost	
Remuneration of Doctors (2), Staff Nurse (4), Data Assistant (1), Internet bill, Zoom license renewal	**~ Rs. 45 Lakhs**

Capital cost was met from **ECRP-II funds**

Operational cost is being met from **NHM funds**

Ease of Scalability

Jun-2023
18 SNCUs

Sep-2023
28 SNCUs

Next:
All SNCUs / NBSUs

A video wall and multiple hotlines / workstations can be added as necessary and any number of SNCUs can be connected as per need.

Lessons Learnt / Way Forward

Lessons Learnt

- **Reliable internet** is a challenge in remote tribal areas – *Need to explore alternate technologies to address this.*

- **Significant improvement in treatment quality** at the SNCUs - *Due to the ease of implementation and access to expert advice.*

- **Streamlining of asceptic protocols**, practices and rational use of antibiotics – *Made possible due to direct observation and support from CoE.*

Way Forward

- The State aims to connect all the remaining peripheral SNCUs and high-load NBSUs to the CoE.

- Improving Antibiotic stewardship by reducing antibiotic usage.

- Reducing hospital acquired infection rates and IV fluid administration rates.

CoE will also be developed as the **State Resource centre for Breastfeeding and Lactation Management.**

Thank You !